



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,359	06/23/2006	Masaki Inoue	4265-0071WOUS	3372
35301	7590	10/31/2007	EXAMINER	
MCCORMICK, PAULDING & HUBER LLP			JOHNSON, MATTHEW A	
CITY PLACE II			ART UNIT	PAPER NUMBER
185 ASYLUM STREET			3682	
HARTFORD, CT 06103			MAIL DATE	DELIVERY MODE
			10/31/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/584,359	INOUE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Matthew Johnson	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

- 1) Responsive to communication(s) filed on 23 June 2006.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

- 4) Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-4 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 23 June 2006 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 6/23/2006.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. The abstract of the disclosure is objected to because the phrase "A shaft 30 in which all of a moving cylinder 36 and a deep groove ball bearing ball bearing 62 are assembled" is grammatically awkward. Additionally, reference characters should be enclosed in parenthesis. Correction is required. See MPEP § 608.01(b).

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "potentiosensor can move/slide toward an axis of the moving cylinder" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claim 1 is objected to because of the following informalities: the phrase "by normal or reverse rotation of the shaft" in line 7, should read --by forward or reverse rotation of the shaft—to facilitate clarity. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re clm 1: The phrase "the position detection apparatus can adjust detection of a position" is unclear rendering the claim indefinite.

Re clms 3 and 4: The limitation "or toward an axis of the moving cylinder" is unclear rendering the claim indefinite. How is the potentiosensor able to move toward an axis of the moving cylinder? The drawings appear to show a pin and slot arrangement that allows axial movement of the potentiosensor, but it is unclear how a movement toward the axis of the moving cylinder is provided.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1 and 2, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Newport et al. (USP-5,809,833).

Re clm 1: Newport discloses a linear actuator (10) comprising:

- A shaft (30) having a male thread portion (Fig. 3)
- A worm gear speed reducer (26)
- A female thread member (36) which is threadedly engaged with the male thread portion (C3 L16-18 & C3 L24-26)
- A moving cylinder (32) which is fixed to the female thread member (C3 L45-47)
- A position detection apparatus (74, 124; Note: C6 L53-62)

Regarding functional limitations, the examiner notes while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. The reference discloses all claimed structural limitations and therefore anticipates the claim (See MPEP 2114).

Re clm 2: Newport discloses the position detection apparatus comprises a potentiosensor (C6 L10-14) and the position detection apparatus is movably provided on the housing (bracket 74 is capable of movement during assembly, C6 L57-62).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 3 and 4, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Newport et al. (USP-5,809,833) in view of Abraham (USP-4,712,441).

Re clms 3 and 4: Newport discloses all of the claim limitations as described above.

While Newport does indeed disclose a driven gear (130) mounted on a sensor shaft (Fig. 7) of the potentiosensor (124), Newport does not disclose the driven gear is meshed with a pinion which rotates in unison with the shaft.

Abraham teaches potentiosensor (190) having a driven gear (200) meshed with a pinion (198, 196, 194, 188) which rotates in unison with a shaft (54) for the purpose of providing rotational power to the potentiosensor through a speed reduction gearing (C7 L50-60).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the device of Newport to include a pinion meshed with the driven gear of the potentiometer, as taught by Abraham, for the purpose of providing rotational power to the potentiometer through a speed reduction gearing (C7 L50-60).

Regarding the limitation "the potentiometer can move/slide in the axial direction of the moving cylinder or toward the axis of the moving cylinder", the examiner notes while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. The reference discloses all claimed structural limitations and therefore anticipates the claim (See MPEP 2114).

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew Johnson whose telephone number is 571-272-7944. The examiner can normally be reached on Monday - Friday 8:30a.m. - 5:00p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJ  
MJ 10/24/07



RICHARD RIDLEY  
SUPERVISORY PATENT EXAMINER